

REMARKS

The Office Action dated March 21, 2008 has been carefully reviewed and the foregoing amendments are made in response thereto. By this Amendment, claims 1 and 31 have been amended to delete the term “a RGD peptide”. New claim 38 has been added to incorporate the subject matter of claims 1 and 26. Thus, Applicants respectfully submit that no prohibitive new matter has been introduced by these amendments. Entry of the remarks and amendments submitted herein and reconsideration of the present application is respectfully requested.

Upon entry of this Amendment, Claims 1, 2, 4 to 5, 19, 25 to 32, and 34 to 38 are pending in this application.

Summary of the Office Action

1. The Examiner has withdrawn the rejection to claims 1, 2, 4, 5, 26, 28, 31, 34, and 35 under 35 U.S.C. §102(b) as allegedly anticipated by Kleinman et al. (Biochemistry 21: 6188-6193, 1982).
2. The Examiner has withdrawn the rejection to claims 27 and 29 under 35 U.S.C. §102(b) as allegedly anticipated by Chudzik et al. (U.S. Patent No. 6,410,044 B1).
3. Claims 1, 4, 5, 25, 27 to 32, and 34-37 are rejected under 35 U.S.C. §102(b) as allegedly anticipated by Samuel et al., Human Gene Therapy 13: 791-802 (2002) (hereinafter “Samuel et al.”).
4. Claims 1, 2, 4, 5, 19, 28, 31, and 35 are rejected under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent No. 6,991,652 to Burg (hereinafter “Burg”).
5. Claims 1, 2, 4 to 6, 19, 25, 26, and 31 are rejected under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent Application Publication 2004/0136977 A1 to Miyamoto (hereinafter “Miyamoto”).
6. Claim 26 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claims.

Claim Rejections under 35 U.S.C. §§ 102(b) and 102(e)

It is axiomatic that a claim is anticipated only if each and every element as set forth in the claim is taught, either expressly or inherently, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Applicants respectfully submit that the claimed synthetic biomaterial, as amended, is not anticipated by any of the cited references because none of the cited references discloses each and every limitation of the claimed synthetic biomaterial as discussed below.

Samuel et al.

Claims 1, 4, 5, 25, 27 to 32, and 34-37 are rejected under 35 U.S.C. §102(b) as allegedly anticipated by Samuel et al.

Applicants respectfully submit that Samuel et al. does not anticipate the claimed invention because Samuel et al. fails to teach each and every limitation set forth in amended claim 1.

The present invention is directed to a synthetic biomaterial comprising two polymers, namely, a bioactive polymer and a biocompatible polymer. In contrast, the collagen-glycosaminoglycan (GAG) matrix of Samuel et al. contains only a single polymer, i.e., collagen. Furthermore, the present bioactive polymer is comprised of (1) at least one polysaccharide and/or proteoglycan subunit, and (2) at least one peptide and/or protein subunit which is a cell adhesion peptide selected from the group consisting of a dRGD peptide, a YIGSR peptide (SEQ ID NO:16), and a IVKAV peptide (SEQ ID NO: 20). Samuel et al., however, does not disclose or remotely suggest the claimed group of cell adhesion peptides. Thus, Samuel et al. does not disclose each and every limitation of the claimed biomaterial.

In view of the claim amendments and foregoing remarks, Applicants respectfully request that the rejections under 35 U.S.C. §102(b) be withdrawn.

Burg

Claims 1, 2, 4, 5, 19, 28, 31, and 35 are rejected under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent No. 6,991,652 to Burg.

Applicants respectfully submit that Burg does not anticipate the claimed invention because Burg fails to teach each and every limitation set forth in amended claim 1.

The Examiner states that Burg discloses a composite comprising a biocompatible construct coated with an alginate-RGD hydrogel. Applicants respectfully note that amended claim 1 recites, *inter alia*, a cell adhesion peptide selected from the group consisting of a dRGD peptide, a YIGSR peptide (SEQ ID NO:16) and a IVKAV peptide (SEQ ID NO: 20). The RGD-hydrogel of Burg contains RGD, but not the claimed cell adhesion peptides. Thus, Burg does not disclose each and every limitation of the claimed biomaterial.

In view of the claim amendments and foregoing remarks, Applicants respectfully request that the rejections under 35 U.S.C. §102(e) be withdrawn.

Miyamoto

Claims 1, 2, 4 to 6, 19, 25, 26, and 31 are rejected under 35 U.S.C. §102(e) as allegedly anticipated by Miyamoto.

Applicants respectfully submit that Miyamoto does not anticipate the claimed invention because Miyamoto fails to teach each and every limitation set forth in amended claim 1.

The claimed invention is directed to a synthetic biomaterial comprising two polymers, namely, a bioactive polymer and a biocompatible polymer, wherein the bioactive polymer is comprised of (1) at least one polysaccharide and/or proteoglycan subunit, and (2) at least one peptide and/or protein subunit which is a cell adhesion peptide selected from the group consisting of a dRGD peptide, a YIGSR peptide (SEQ ID NO:16), and a IVKAV peptide (SEQ ID NO: 20). It is important to note that Miyamoto does not disclose or remotely suggest any of the claimed cell adhesion peptides. Thus, Miyamoto does not disclose each and every limitation of the claimed biomaterial.

In view of the claim amendments and foregoing remarks, Applicants respectfully request that the rejections under 35 U.S.C. §102(e) be withdrawn.

Claim Objections

Claim 26 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claims.

Applicants respectfully note that new Claim 38 includes all the limitations of Claims 1 and 26. Since Claim 26 is directly dependent upon Claim 1, Applicants respectfully submit

that new Claim 38 is allowable.

Conclusion

As all remaining issues have been addressed in this paper, Applicants respectfully urge that a Notice of Allowance is in order. Should the Examiner believe that a telephonic interview would expedite prosecution and allowance of this application, she is encouraged to contact the undersigned at her convenience.


Except for issue fees payable under 37 C.F.R. 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-1283. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. 1.136(a)(3).

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